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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/085,851

02/28/2002

Stanley W. Stephenson

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7590

02/25/2004

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EXAMINER

WANG, GEORGE Y

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 02/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,851

Applicant(s)

STEPHENSON, STANLEY W.

Examiner

George Y. Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
4a) Of the above claim(s) 7-12 and 16 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6 and 13-15 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 28 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. New corrected drawings are required in this application because they are informally labeled. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-6, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hasegawa (U.S. Patent No. 5,055,662) in view of Yang et al. (U.S. Patent No. 6,061,107, from hereinafter "Yang") and Hara (U.S. Patent No. 4,797,542).

4. As to claims 1 and 13, Hasegawa discloses a transaction card and method of making a transaction card having a card body (fig. 1, ref. 1), machine readable

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information on the card body (fig. 1, ref. 5), a flexible display (fig. 1, ref. 2) affixed to the card body for displaying information related to the machine readable information, and an array of conductors, or contacts (fig. 1, ref. 16), connected to the display for applying selected voltages from an external display driver that changes the state of the display.

Although the reference teaches a display having a polymer-dispersed cholesteric liquid crystal material (fig. 3, ref. 12) having a first planar reflective state (col. 3, lines 21-22) and a second transparent focal conic state (col. 3, lines 30-36), which is responsive to an applied voltage to display information until the voltage is removed (col. 3, lines 44-46), Hasegawa does not specifically disclose a display that is pressure-insensitive. The reference also does not disclose a patterned conductors.

Yang discloses a bistable polymer dispersed cholesteric liquid crystal display (LCD) that is insensitive to pressure (col. 6, lines 15-18).

Hara discloses discloses a transaction card with an LCD display having patterned conductors that are a printed carbon (fig. 8, ref. 23; col. 4, lines 1-6).

It would have been obvious to one of ordinary skill at the time the invention was made to have formed a transaction card with a pressure-insensitive display since one would be motivated to provide versatility (col. 5, lines 1-6), such as different pitches in different regions to make, for example, a multi-color display, self-adhesion (col. 6, lines 18-22).that reduces bulkiness, and protection (col. 6, lines 15-18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have patterned conductors since one would be motivated to corresponding with openings so

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that the conductors would provide reliable compatibility and input terminals for operation and function, such as memory storage application (col. 1, lines 50-65).

5. Regarding claims 2, Hasegawa discloses a transaction card as recited above having a machine readable information on the card body that is magnetic (fig. 1, ref. 5).

6. As per claim 3, Hasegawa discloses a transaction card as recited above having a card body that is a prepaid card, such as a phone card or commuter transaction card (col. 1, lines 14-19).

7. As to claim 6, Hasegawa discloses a transaction card as recited above having a display that at least restricted to seven digits or number displays (col. 1, lines 36-41; col. 1, lines 58-64).

8. Regarding claims 4, 14, and 15, Hasegawa discloses a transaction card made with a cholesteric liquid crystal material as recited above following the steps of providing the liquid crystal layer, providing a substrate having a first conductor (fig. 3, ref. 16b), coating the dispersion on the substrate (fig. 3, ref. 15), and printing the conductors, or contact circuits (fig. 3, ref. 6) on to the coated dispersion.

However, the reference fails to specifically disclose a polymer ratio that renders the composition pressure-insensitive. Furthermore, the reference fails to specifically

disclose dispersing the liquid crystal in an aqueous gelatin solution and including the step of drying the dispersion after coating.

Yang discloses a bistable polymer dispersed cholesteric liquid crystal display (LCD) that is made insensitive to pressure (col. 6, lines 15-18) by dispersing the liquid crystal in an aqueous gelatin solution and including the step of drying the dispersion after coating (col. 2, lines 54-64).

It would have been obvious to one of ordinary skill at the time the invention was made to have formed a transaction card with a pressure-insensitive display since one would be motivated to provide versatility (col. 5, lines 1-6), such as different pitches in different regions to make, for example, a multi-color display, self-adhesion (col. 6, lines 18-22).that reduces bulkiness, and protection (col. 6, lines 15-18).

9. As to claim 5, Hasegawa and Yang disclose a transaction card as recited above with conductors, however, the reference fail to specifically disclose conductors that are a printed emulsion of carbon in polymer.

Hara discloses a transaction card with an LCD display having conductors that are a printed carbon (fig. 4, ref. 32a; col. 5, lines 14-19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have conductors that are a printed emulsion of carbon in polymer since one would be motivated to provide a reliable and well-known means of transmitting power to the display.

Response to Arguments

10. Applicant's arguments with respect to claims 1-6 and 13-15 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In this case, Applicant's main argument is that the Yang reference does not teach a pressure-insensitive material and that the conductors of Hasegawa are not patterned. Examiner points out that is clear that Yang discloses a bistable polymer dispersed cholesteric liquid crystal display (LCD) that is insensitive to pressure (col. 6, lines 15-18). Applicant argues that it would be improper to combine the teachings of Yang with the teachings of Hasegawa because none of the references "teaches, discloses, or suggests...a portable card, which resists the deleterious effects on the card display caused by the flexing of the transaction card." However, Examiner notes that the Hasegawa invention clearly desires an "easy-to-handle" card that lends itself to speedy processing and has "strength to protect against breakage." Furthermore, Yang teaches that the liquid crystal material is not sensitive to pressure. The mention of use in "large

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area displays” are just an example of where the material can be useful. It is not a limiting factor since Yang also teaches that the material is to be used generally in LCD devices “not limited to the embodiments described above.”

In response to Applicant’s argument that the conductors are patterned, Examiner first notes that the patterning of conductors is a rather broad limitation that has many possible interpretations. The Hasegawa reference itself may have patterned conductors simply by placing them at the predetermined locations on the card. One would be able to come to this conclusion even without language that explicitly uses this language. However, for the purposes of clarification, Examiner notes that the Hara reference clearly teaches patterned conductors on the wiring board leading to the external contacts. Therefore, Examiner has met the burden of Applicant’s amendment.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 571-272-2304. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gw
February 11, 2004



TARIFUR R. CHOWDHURY
PRIMARY EXAMINER